

ใบรายงานผลการตรวจวัดสิ่งแวดล้อม

ภาคผนวกที่ 4.1 ใบรายงานผลการตรวจวัดคุณภาพน้ำทิ้ง

ภาคผนวกที่ 4.1

ใบรายงานผลการตรวจวัดคุณภาพน้ำทิ้ง

ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด

Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)

Project Site : 1031 ถนนเพลินจิต แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร 10330

Sampling Location : ระบอบน้ำดี (จุดก่อนเข้าบ่อบำบัดน้ำ)

Sampling Method : Grab

Sample Type : Wastewater

Sampling By : นายวิชาญ วิเชียร (ว-156-ก-6999)

Sampling Date : 10 Feb 65

Sampling Time : 13.34

Received Date : 11 Feb 22

Analytical Date : 11 - 25 Feb 22

Analysis No. : WC-809

Report Date : 25 Feb 22

Report No. : R-WW2203250008

Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH*	Electrometric Method	6.45	-	-
2	Biochemical Oxygen Demand*	5-Day BOD Test, Azide Modification Method	440	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	129	-	mg/l
4	Sulfide*	ZnS Precipitation, Iodometric Method	2.3	-	mg/l
5	Oil & Grease*	Liquid-Liquid, Partition-Gravimetric Method	21.7	-	mg/l
6	Total Kjeldahl Nitrogen*	Digestion, Semi-Micro Kjeldahl Method	85.7	-	mg/l
7	Chloride*	Argentometric Method	117	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	5.4x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Black/Turbid	-	-
Sediment			Black	-	-

Remark\* : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya

(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.

(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Watep

(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด

Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)

Project Site : 1031 ถนนเพลินจิต แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร 10330

Sampling Location : ระบบบำบัด (บ่อพักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. คลินแดง)

Sampling Method : Grab

Sample Type : Wastewater

Sampling By : นายวิชาญ วิเชียร (ว-156-จ-6999)

Sampling Date : 10 Feb 65

Sampling Time : 13.38

Received Date : 11 Feb 22

Analytical Date : 11 - 25 Feb 22

Analysis No. : WC-810

Report Date : 25 Feb 22

Report No. : R-WW2203250009

Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.54	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	395	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	117	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	2.0	≤1.0	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	21.3	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	76.1	≤35	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	115	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Black/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

<sup>1</sup> : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya

(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.

(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Watep G

(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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### ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนโรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิทยุ แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อพักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายวิชาญ วิเชียร (๖-156-๖-6999)  
Sampling Date : 10 Feb 65  
Sampling Time : 14.10  
Received Date : 11 Feb 22  
Analytical Date : 11 - 25 Feb 22  
Analysis No. : WC-811  
Report Date : 25 Feb 22  
Report No. : R-WW2203250006  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	9.07	-	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	129	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	36	-	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	4.0	-	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	4.0	-	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	143	-	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	120	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya

(Miss Sahatsaya Fakbua)

Chief of Wastewater Testing Section

๖-156-๖-8526

Analyst

Thamonwan K.

(Miss Thamonwan Ketwongsa)

Technical Manager

๖-156-๖-8701

Reviewer

W. G

(Mr. Weratep Geeratithadaniyom)

Laboratory Director

๖-156-๖-3424

Approver

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# ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วน โรงแรม)  
Project Site : 88 ถนนพหลโยธิน และ ถนนวิภาวดี แขวงจตุจักร เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายวิชาญ วิเชียร (๖-156-๖-6999)  
Sampling Date : 10 Feb 22  
Sampling Time : 14.20  
Received Date : 11 Feb 22  
Analytical Date : 11 - 25 Feb 22  
Analysis No. : WC-812  
Report Date : 25 Feb 22  
Report No. : R-WW2203250007  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>#1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.53	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	123	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	29	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	0.7	≤1.0	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	4.0	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	15.5	≤35	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	61.26	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

<sup>#1</sup> : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##

Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
๖-156-๖-8526  
Analyst

Thamornwan K.  
(Miss Thamornwan Ketwongsa)  
Technical Manager  
๖-156-๖-8701  
Reviewer

Watt O  
(Mr. Weratep Geerattithadaniyom)  
Laboratory Director  
๖-156-๖-3424  
Approver

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# ANALYSIS REPORT

Customer Name : บริษัท หามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนเพลินจิต แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อพักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-ช-8694)  
Sampling Date : 15 Mar 65  
Sampling Time : 13.25  
Received Date : 16 Mar 22  
Analytical Date : 16 - 30 Mar 22  
Analysis No. : WC-834  
Report Date : 30 Mar 22  
Report No. : R-WW2203300001  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH*	Electrometric Method	6.33	-	-
2	Biochemical Oxygen Demand*	5-Day BOD Test, Azide Modification Method	840	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	116	-	mg/l
4	Sulfide*	ZnS Precipitation, Iodometric Method	4.7	-	mg/l
5	Oil&Grease*	Liquid-Liquid, Partition-Gravimetric Method	18.3	-	mg/l
6	Total Kjeldahl Nitrogen*	Digestion, Semi-Micro Kjeldahl Method	80.5	-	mg/l
7	Chloride*	Argentometric Method	97.97	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>2</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Black/Turbid	-	-
Sediment			Black	-	-

Remark\* : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Watep 6  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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ANALYSIS REPORT

Customer Name : บริษัท หามาโอ โปรโซลูชั่น จำกัด

Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)

Project Site : 1031 ถนนพหลโยธิน แขวงจตุจักร เขตปทุมวัน กรุงเทพมหานคร 10330

Sampling Location : ระบบบำบัด (บ่อพักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)

Sampling Method : Grab

Sample Type : Wastewater

Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)

Sampling Date : 15 Mar 65

Sampling Time : 13.35

Received Date : 16 Mar 22

Analytical Date : 16 - 30 Mar 22

Analysis No. : WC-835

Report Date : 30 Mar 22

Report No. : R-WW2203300002

Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>#1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.47	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	120	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	80	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	4.2	≤1.0	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	17.7	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	78.3	≤35	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	89.97	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Black/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

<sup>/1</sup> : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya

(Miss Sahatsaya Fakbua)

Chief of Wastewater Testing Section

ว-156-ก-8526

Analyst

Thamonwan K.

(Miss Thamonwan Ketwongs)

Technical Manager

ว-156-ก-8701

Reviewer

Mr. G

(Mr. Weratep Geeratithadaniyom)

Laboratory Director

ว-156-ก-3424

Approver

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# ANALYSIS REPORT

Customer Name : บริษัท ทานาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ตึกโรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิภาวดี แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อกักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)  
Sampling Date : 15 Mar 65  
Sampling Time : 14.10  
Received Date : 16 Mar 22  
Analytical Date : 16 - 30 Mar 22  
Analysis No. : WC-836  
Report Date : 30 Mar 22  
Report No. : R-WW2203300003  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	5.74	-	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	368	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	144	-	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	3.6	-	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	1.6	-	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	27.2	-	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	80.98	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	3.5x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Clear	-	-
Sediment			Brown	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya

(Miss Sahatsaya Fakbua)

Chief of Wastewater Testing Section

ว-156-ก-8526

Analyst

Thamonwan ๙

(Miss Thamonwan Ketwongsa)

Technical Manager

ว-156-ก-8701

Reviewer

Mr. G

(Mr. Weratep Geerattithadaniyom)

Laboratory Director

ว-156-ก-3424

Approver

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# ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรีโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนโรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิภาวดี แขวงคลองพูนพิน เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-ก-8694)  
Sampling Date : 15 Mar 65  
Sampling Time : 14.20  
Received Date : 16 Mar 22  
Analytical Date : 16 - 30 Mar 22  
Analysis No. : WC-837  
Report Date : 30 Mar 22  
Report No. : R-WW2203300004  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>/1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	8.04	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	19.0	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	6	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	0.1	≤1.0	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	0.7	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	5.3	≤35	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	32.99	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	1.7x10 <sup>2</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Brown	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

<sup>/1</sup> : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

*Thamomwan K.*  
(Miss Thamomwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

*Waf G*  
(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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## ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนเพลินจิต แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อพักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)  
Sampling Date : 20 Apr 22  
Sampling Time : 13.50

Received Date : 21 Apr 22  
Analytical Date : 21 Apr - 9 May 22  
Analysis No. : WD-241  
Report Date : 9 May 22  
Report No. : R-WW2205090014  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH*	Electrometric Method	6.75	-	-
2	Biochemical Oxygen Demand*	5-Day BOD Test, Azide Modification Method	300	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	132	-	mg/l
4	Sulfide*	ZnS Precipitation, Iodometric Method	1.8	-	mg/l
5	Oil&Grease*	Liquid-Liquid, Partition-Gravimetric Method	16.0	-	mg/l
6	Total Kjeldahl Nitrogen*	Digestion, Semi-Micro Kjeldahl Method	48.0	-	mg/l
7	Chloride*	Argentometric Method	127	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	6.3x10 <sup>3</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark \* : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-จ-8701  
Reviewer

Wep G  
(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

## ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนพหลโยธิน แขวงจตุจักร เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (จ-156-จ-8694)  
Sampling Date : 20 Apr 22  
Sampling Time : 13.55  
Received Date : 21 Apr 22  
Analytical Date : 21 Apr - 9 May 22  
Analysis No. : WD-242  
Report Date : 9 May 22  
Report No. : R-WW2205090015  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>/1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.30	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	158	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	82	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	0.6	≤1.0	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	13.0	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	45.0	≤35	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	119	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	4.9x10 <sup>3</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

#1 : Tested by Special Lab Envi & Consultant Co., Ltd.

/1 : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
จ-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
จ-156-ก-8701  
Reviewer

Wtg G  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
จ-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.



### ANALYSIS REPORT

Customer Name : บริษัท หามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วน โรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิภาวดี แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อกักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)  
Sampling Date : 20 Apr 22  
Sampling Time : 14.50

Received Date : 21 Apr 22  
Analytical Date : 21 Apr - 9 May 22  
Analysis No. : WD-243  
Report Date : 9 May 22  
Report No. : R-WW2205090016  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH*	Electrometric Method	9.16	-	-
2	Biochemical Oxygen Demand*	5-Day BOD Test, Azide Modification Method	142	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	65	-	mg/l
4	Sulfide*	ZnS Precipitation, Iodometric Method	0.2	-	mg/l
5	Oil&Grease*	Liquid-Liquid, Partition-Gravimetric Method	6.0	-	mg/l
6	Total Kjeldahl Nitrogen*	Digestion, Semi-Micro Kjeldahl Method	142	-	mg/l
7	Chloride*	Argentometric Method	114	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark\* : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Wtg G  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

# ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วน โรงแรม)  
Project Site : 88 ถนนพหลโยธิน และ ถนนวิภาวดี แขวงจตุจักร เขตจตุจักร กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ ทามา. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)  
Sampling Date : 20 Apr 22  
Sampling Time : 14.55

Received Date : 21 Apr 22  
Analytical Date : 21 Apr - 9 May 22  
Analysis No. : WD-244  
Report Date : 9 May 22  
Report No. : R-WW2205090017  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	8.91	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	87.5	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	63	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	<0.1	≤1.0	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	3.0	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	88.9	≤35	mg/l
7	Chloride <sup>*</sup>	Argentometric Method	97.84	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	5.4x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

<sup>1</sup> : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-จ-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-จ-8701  
Reviewer

Wt 6  
(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-จ-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.



### ANALYSIS REPORT

Customer Name	: บริษัท ทามาโอ โปรโซลูชั่น จำกัด	Received Date	: 27 May 22
Project Name	: โครงการ Central Embassy (ส่วนตราชพินค้า)	Analytical Date	: 27 May - 14 Jun 22
Project Site	: 1031 ถนนพหลินจิต แขวงจตุจักร กรุงเทพมหานคร 10330	Analysis No.	: WE-618
Sampling Location	: ระบบบำบัด (จุดก่อนเข้าบ่อพักน้ำ)	Report Date	: 14 Jun 22
Sampling Method	: Grab	Report No.	: R-WW2206140027
Sample Type	: Wastewater	Environment Condition	: 25 °C ± 5 °C, 50 %RH ± 15 %RH
Sampling By	: นายศิริชัย มีศรี (ว-156-จ-8694)		
Sampling Date	: 26 May 22		
Sampling Time	: 13.40		

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	6.53	-	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	440	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	159	-	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	3.0	-	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	27.7	-	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	52.4	-	mg/l
7	Chloride <sup>*</sup>	Mercuric Nitrate Method	130	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Gray	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

*Thamonwan K.*  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

*Mr. G*  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

## ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนเพลินจิต แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-ก-8694)  
Sampling Date : 26 May 22  
Sampling Time : 13.45  
Received Date : 27 May 22  
Analytical Date : 27 May - 14 Jun 22  
Analysis No. : WE-619  
Report Date : 14 Jun 22  
Report No. : R-WW2206140028  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>/1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.58	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	430	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	153	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	2.1	≤1.0	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	25.0	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	51.0	≤35	mg/l
7	Chloride <sup>*</sup>	Mercuric Nitrate Method	116	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	2.2x10 <sup>3</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Gray	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

#1 : Tested by Special Lab Envi & Consultant Co., Ltd.

/1 : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

*Thamonwan K.*  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

*Wip G*  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

### ANALYSIS REPORT

Customer Name : บริษัท หามโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนโรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิฑู แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อพักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)  
Sampling Date : 26 May 22  
Sampling Time : 14.40

Received Date : 27 May 22  
Analytical Date : 27 May - 14 Jun 22  
Analysis No. : WE-620  
Report Date : 14 Jun 22  
Report No. : R-WW2206140029  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH*	Electrometric Method	4.45	-	-
2	Biochemical Oxygen Demand*	5-Day BOD Test, Azide Modification Method	1,080	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	67	-	mg/l
4	Sulfide*	ZnS Precipitation, Iodometric Method	2.4	-	mg/l
5	Oil & Grease*	Liquid-Liquid, Partition-Gravimetric Method	2.0	-	mg/l
6	Total Kjeldahl Nitrogen*	Digestion, Semi-Micro Kjeldahl Method	14.0	-	mg/l
7	Chloride*	Mercuric Nitrate Method	108	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>5</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Black	-	-

Remark\* : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

*Thamonwan K.*  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

*Wp6*  
(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.



### ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embrassy (ส่วนโรงแรม)  
Project Site : 88 ถนนพหลโยธิน และ ถนนวิภาวดี แขวงจตุจักร เขตจตุจักร กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายศิริชัย มีศรี (ว-156-จ-8694)  
Sampling Date : 26 May 22  
Sampling Time : 14.45

Received Date : 27 May 22  
Analytical Date : 27 May - 14 Jun 22  
Analysis No. : WE-621  
Report Date : 14 Jun 22  
Report No. : R-WW2206140030  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>/1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.99	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	318	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	61	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	0.5	≤1.0	mg/l
5	Oil&Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	<0.5	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	12.1	≤35	mg/l
7	Chloride <sup>*</sup>	Mercuric Nitrate Method	65.98	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	5.4x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Turbid	-	-
Sediment			Brown	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

#1 : Tested by Special Lab Envi & Consultant Co., Ltd.

/1 : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Wtj G  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

## ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนพหลโยธิน แขวงจตุจักร เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อพักน้ำ)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายนิพล เก้าพัน (ว-156-จ-7004)  
Sampling Date : 17 Jun 22  
Sampling Time : 12.49

Received Date : 18 Jun 22  
Analytical Date : 18 Jun - 15 Jul 22  
Analysis No. : WF-991  
Report Date : 15 Jul 22  
Report No. : R-WW2207150038  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	6.36	-	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	515	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	237	-	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	1.5	-	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	25.0	-	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	51.2	-	mg/l
7	Chloride <sup>*</sup>	Mercuric Nitrate Method	189	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	1.6x10 <sup>5</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Black/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-จ-8526  
Analyst

*Thamonwan K.*  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-จ-8701  
Reviewer

*Wtp 6*  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-จ-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.



### ANALYSIS REPORT

Customer Name : บริษัท หมาไอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนพหลโยธิน แขวงจตุจักร เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : ระบบบำบัด (บ่อกักน้ำก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายนิพนธ์ เก้าพัน (ว-156-จ-7004)  
Sampling Date : 17 Jun 22  
Sampling Time : 12.49

Received Date : 18 Jun 22  
Analytical Date : 18 Jun - 15 Jul 22  
Analysis No. : WF-992  
Report Date : 15 Jul 22  
Report No. : R-WW2207150039  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>/1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.19	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	510	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	205	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	1.4	≤1.0	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	10.0	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	49.7	≤35	mg/l
7	Chloride <sup>*</sup>	Mercuric Nitrate Method	187	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	9.2x10 <sup>4</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Black/Turbid	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

#1 : Tested by Special Lab Envi & Consultant Co., Ltd.

<sup>/1</sup> : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Wtp G  
(Mr. Weratop Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

### ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนสรรพสินค้า)  
Project Site : 1031 ถนนเพลินจิต แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร 10330  
Sampling Location : จุดต่อน้ำทิ้งตรง  
Sampling Method : -  
Sample Type : Cooling water  
Sampling By : นายนิพล เกื้อพัน (ว-156-จ-7004)  
Sampling Date : 17 Jun 22  
Sampling Time : 13.12

Received Date : 18 Jun 22  
Analytical Date : 18 Jun - 15 Jul 22  
Analysis No. : WF-994  
Report Date : 15 Jul 22  
Report No. : R-WW2207150041  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	7.62	-	-
2	Residual Chlorine <sup>*</sup>	DPD Colorimetric Method	0.01	-	mg/l
3	Total Coliform Bacteria <sup>#1</sup>	Multiple-Tube Fermentation Technique (SM:9221 B)	49	-	MPN/100mL
4	Legionella spp. <sup>#1</sup>	APHA 2017 : 9260 J	ตรวจไม่พบ	-	CFU/L
Sample Characterization					
Water's colour / Turbid			Yellow/Clear	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Analytical Laboratory Service Co.,Ltd.

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

*Thamonwan R.*  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

*Wg 6*  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

### ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embrassy (ส่วนสรรพสินค้า)  
Project Site : ถนนเพลินจิต และ ถนนวิทยุ แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : จุดอาคารรองรับน้ำไหล  
Sampling Method : -  
Sample Type : Cooling water  
Sampling By : นายนิพนธ์ เก้าพัน (ว-156-ก-7004)  
Sampling Date : 17 Jun 22  
Sampling Time : 13.04

Received Date : 18 Jun 22  
Analytical Date : 18 Jun - 15 Jul 22  
Analysis No. : WF-993  
Report Date : 15 Jul 22  
Report No. : R-WW2207150040  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	7.44	-	-
2	Residual Chlorine <sup>*</sup>	DPD Colorimetric Method	0.02	-	mg/l
3	Total Coliform Bacteria <sup>#1</sup>	Multiple-Tube Fermentation Technique (SM:9221 B)	9.2x10 <sup>2</sup>	-	MPN/100 mL
4	Legionella spp. <sup>#1</sup>	APHA 2017 : 9260 J	ตรวจไม่พบ	-	CFU/L
Sample Characterization					
Water's colour / Turbid			Yellow/Clear	-	-
Sediment			Brown	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Analytical Laboratory Service Co.,Ltd.

## End of The Analysis Report ##



*Sahatsaya*  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

*Thamonwan K.*  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

*Wg G*  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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### ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embrassy (ส่วนโรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิทยุ แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (จุดก่อนเข้าบ่อบำบัด)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายนิพล เกื้อพันธ์ (ว-156-ก-7004)  
Sampling Date : 29 Jun 22  
Sampling Time : 10.45  
Received Date : 1 Jul 22  
Analytical Date : 1 - 15 Jul 22  
Analysis No. : WG-115  
Report Date : 15 Jul 22  
Report No. : R-WW2207150062  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH*	Electrometric Method	6.70	-	-
2	Biochemical Oxygen Demand*	5-Day BOD Test, Azide Modification Method	5.9	-	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	10	-	mg/l
4	Sulfide*	ZnS Precipitation, Iodometric Method	<0.1	-	mg/l
5	Oil&Grease*	Liquid-Liquid, Partition-Gravimetric Method	<0.5	-	mg/l
6	Total Kjeldahl Nitrogen*	Digestion, Semi-Micro Kjeldahl Method	7.4	-	mg/l
7	Chloride*	Mercuric Nitrate Method	50.03	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	5.4x10 <sup>3</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Clear	-	-
Sediment			Brown	-	-

Remark\* : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Special Lab Envi & Consultant Co., Ltd.

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamunwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Wp G  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.

### ANALYSIS REPORT

Customer Name : บริษัท หามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embassy (ส่วนโรงแรม)  
Project Site : 88 ถนนเพลินจิต และ ถนนวิทยุ แขวงลุมพินี เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ระบบบำบัด (บ่อกักเก็บก่อนปล่อยสู่ระบบบำบัดของ กทม. ดินแดง)  
Sampling Method : Grab  
Sample Type : Wastewater  
Sampling By : นายนิพล เกื้อพันธ์ (ว-156-จ-7004)  
Sampling Date : 29 Jun 22  
Sampling Time : 10.50  
Received Date : 1 Jul 22  
Analytical Date : 1 - 15 Jul 22  
Analysis No. : WG-116  
Report Date : 15 Jul 22  
Report No. : R-WW2207150063  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard <sup>/1</sup>	Unit
1	pH <sup>*</sup>	Electrometric Method	6.83	5 - 9	-
2	Biochemical Oxygen Demand <sup>*</sup>	5-Day BOD Test, Azide Modification Method	4.3	≤20	mg/l
3	Total Suspended Solids	Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, 23 <sup>rd</sup> Edition 2017 part 2540 D	8	≤30	mg/l
4	Sulfide <sup>*</sup>	ZnS Precipitation, Iodometric Method	<0.1	≤1.0	mg/l
5	Oil & Grease <sup>*</sup>	Liquid-Liquid, Partition-Gravimetric Method	<0.5	≤20	mg/l
6	Total Kjeldahl Nitrogen <sup>*</sup>	Digestion, Semi-Micro Kjeldahl Method	5.3	≤35	mg/l
7	Chloride <sup>*</sup>	Mercuric Nitrate Method	39.82	-	mg/l
8	Total Coliform Bacteria <sup>#1</sup>	MPN Test	5.4x10 <sup>3</sup>	-	MPN/100 mL
Sample Characterization					
Water's colour / Turbid			Yellow/Clear	-	-
Sediment			Brown	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

#1 : Tested by Special Lab Envi & Consultant Co., Ltd.

/1 : Notification of the Ministry of Natural Resources and Environment, B.E. 2548 (2005)

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ค-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ค-8701  
Reviewer

Mr. G  
(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-ค-3424  
Approver

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REPORTED ANALYSIS REFERS TO SUBMITTED SAMPLE (S) ONLY.



ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด  
Project Name : โครงการ Central Embrassy (ส่วน โรงแรม)  
Project Site : 88 ถนนพหลโยธิน และ ถนนวิภาวดี แขวงจตุจักร เขตปทุมวัน กรุงเทพมหานคร  
Sampling Location : ก้อนน้ำ Cooling Tower  
Sampling Method : -  
Sample Type : Cooling water  
Sampling By : นายนิพล เก้าพัน (ว-156-จ-7004)  
Sampling Date : 29 Jun 22  
Sampling Time : 11.30  
Received Date : 1 Jul 22  
Analytical Date : 1 - 15 Jul 22  
Analysis No. : WG-117  
Report Date : 15 Jul 22  
Report No. : R-WW2207150064  
Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	7.05	-	-
2	Residual Chlorine <sup>*</sup>	DPD Colorimetric Method	<0.01	-	mg/l
3	Total Coliform Bacteria <sup>#1</sup>	Multiple-Tube Fermentation Technique (SM:9221 B)	<1.1	-	MPN/100mL
Sample Characterization					
Water's colour / Turbid			Colourless/Clear	-	-
Sediment			-	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Analytical Laboratory Service Co.,Ltd.

## End of The Analysis Report ##



Sahatsaya  
(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.  
(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Wt 6  
(Mr. Weratep Geeratithadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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ANALYSIS REPORT

Customer Name : บริษัท ทามาโอ โปรโซลูชั่น จำกัด

Project Name : โครงการ Central Embrassy (ส่วนโรงแรม)

Project Site : 88 ถนนพหลโยธิน และ ถนนวิภาวดี แขวงจตุจักร กรุงเทพมหานคร

Sampling Location : ออกจาก Cooling Tower

Sampling Method : -

Sample Type : Cooling water

Sampling By : นายนิพนธ์ เก้าพัน (ว-156-ก-7004)

Sampling Date : 29 Jun 22

Sampling Time : 11.35

Received Date : 1 Jul 22

Analytical Date : 1 - 15 Jul 22

Analysis No. : WG-118

Report Date : 15 Jul 22

Report No. : R-WW2207150065

Environment Condition : 25 °C ± 5 °C, 50 %RH ± 15 %RH

Item	Parameter	Analysis Method	Result	Standard	Unit
1	pH <sup>*</sup>	Electrometric Method	7.71	-	-
2	Residual Chlorine <sup>*</sup>	DPD Colorimetric Method	<0.01	-	mg/l
3	Total Coliform Bacteria <sup>#1</sup>	Multiple-Tube Fermentation Technique (SM:9221 B)	5.1	-	MPN/100mL
Sample Characterization					
Water's colour / Turbid			Yellow/Clear	-	-
Sediment			Black	-	-

Remark<sup>\*</sup> : The parameters are outside the scope of accreditation to ISO/IEC 17025:2017 by Department of Science Service, Ministry of Science and Technology.

<sup>#1</sup> : Tested by Analytical Laboratory Service Co.,Ltd.

## End of The Analysis Report ##



Sahatsaya

(Miss Sahatsaya Fakbua)  
Chief of Wastewater Testing Section  
ว-156-ก-8526  
Analyst

Thamonwan K.

(Miss Thamonwan Ketwongsa)  
Technical Manager  
ว-156-ก-8701  
Reviewer

Wt 6

(Mr. Weratep Geerathadaniyom)  
Laboratory Director  
ว-156-ก-3424  
Approver

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